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09/922,142	08/03/2001	Yong Yan	US 010358	7434

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EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
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2621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/922,142

Applicant(s)

YAN, YONG

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/22/07 have been fully read and considered but they are not persuasive.

Regarding lines 1-10 on page 8 of applicant remarks, applicant asserts that Hibi does not disclose "an object evaluation system that evaluates a video object using a predetermined criterion" as recited in claim 1. The examiner respectfully and strongly disagrees. As stated in Hibi's abstract, Hibi discloses that an effective-area selecting portion selects a valid or invalid mask depending upon a position of a processable object. In column 32, line 66 to column 33, line 9, Hibi discloses the effective area selection portion 231 for effectively evaluating the video object based on the position on the control grid used for evaluating a portion of the inputted video image, wherein column 35, lines 10-27, Hibi discloses the use of variable-size processable areas, where the control grid points are set for each unit area of 16x16 pixels or 8x8 pixels, for evaluating the video object or processable object dependent upon the position within the processable area using a predetermined criterion, ie. motion vectors. Clearly, Hibi teaches "an object evaluation system that evaluates a video object using a predetermined criterion". Also, peruse the rejection below for elaboration.

Regarding the first paragraph on page 9 of the applicant's remarks, applicant's representative keeps arguing how Hibi does not disclose the aforementioned limitation and how the examiner needs to point out the citation. The examiner has already elaborated this limitation in the above paragraph and in the rejection. The examiner

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respectfully disagrees with the applicant representative's review and misconstrued analysis of the art at hand (US 5,886,742). Peruse the above paragraph and in the rejection below. The applicant's representative can provide opinions that differ with the Office, however, the rejection of the claims is strictly evaluated on the facts, merits and evidence.

Regarding lines 17-18 on page 9 of applicant's remarks, applicant states that Hibi does not disclose "a mask generation system that generates one of a plurality of mask types for the video object based on the evaluation of the video object" as recited in claim 1. The examiner respectfully disagrees. In figure 23, Hibi discloses the use of plural mask types, as evidenced by the generation of mask 1, 2, 3, etc., where these "effective-area selecting masks" implement plural mask types for effective area selection of the video object during the evaluation of video objects dependent on the position of each processable area by applying the selective mask, wherein the processable area is variable for implementation during the evaluation of the video object, as seen in column 35, lines 10-37. Thus, Hibi discloses "a mask generation system that generates one of a plurality of mask types for the video object based on the evaluation of the video object".

To avoid boredom of repetition of the aforementioned limitations, independent claims 11 and 20 are rejected for similar reasons as independent claim 1 since the limitations are similar. Claims 3, 5, 10, 13, 15, 22 and 24 are rejected for similar reasons since they depend from independent claims 1, 11 and 20.

The 35 U.S.C. 103 (a) rejection of dependent claims 2, 4, 7-9, 12, 14, 17-19, 21, 23 and 26-28 is maintained under Hibi in view of Chen for reasons as stated in the rejection below.

The 35 U.S.C. 103 (a) rejection of dependent claims 6, 16 and 25 is maintained under Hibi in view of Sekiguchi for reasons as stated in the rejection below.

Considerable time and effort has been dedicated to the analysis of applicant representative's remarks in regards to the present invention. Clearly, there is plenty of factual support for the broad claims of the present application. All of the broad claim limitations are met.

In conclusion, the rejection of the claims is maintained.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 5, 10, 11, 13, 15, 20, 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Hibi (5,886,742).

Regarding claim 1, Hibi discloses a video object encoding system, comprising:
an object evaluation system that evaluates a video object using a predetermined criterion (see abstract, Hibi discloses that an effective-area selecting portion selects a valid or invalid mask depending upon a position of a processable object; further, in col.32, ln.66 to col.33, ln.9, Hibi discloses the effective area selection portion 231 for

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effectively evaluating the video object based on the position on the control grid used for evaluating a portion of the inputted image; and in col.35, ln.10-27, Hibi discloses the use of variable-size processable areas, where the control grid points are set for each unit area of 16x16 pixels or 8x8 pixels, for evaluating the video object or processable object dependent upon the position within the processable area using a predetermined criterion, ie.motion vectors); and

a mask generation system that generates one of a plurality of mask types for the video object based on the evaluation of the video object (fig.23 and col.35, ln.10-37; Hibi discloses using plural mask types, as evidenced by the generation of mask 1, 2, 3, etc., and that these "effective-area selecting masks" apply plural mask types for effective area selection of the video object during the evaluation of video objects dependent on the position of each processable area by using the selective mask, wherein the processable area is variable for implementation during the evaluation of the video object).

Regarding claims 3, 13 and 22, Hibi discloses wherein the predetermined criterion examines a shape of the video object (col.42, ln.57-67).

Regarding claims 5, 15 and 24, Hibi discloses wherein the predetermined criterion examines motion information regarding the video object (col.35, ln.10-27).

Regarding claim 10, Hibi discloses MPEG-4 (col.3, ln.56-58).

Regarding claim 11, Hibi discloses a program product stored on a recordable medium, which when executed, encodes video objects, the program product comprising:

program code configured to evaluate a video object using a predetermined criterion (see abstract, Hibi discloses that an effective-area selecting portion selects a valid or invalid mask depending upon a position of a processable object; further, in col.32, ln.66 to col.33, ln.9, Hibi discloses the effective area selection portion 231 for effectively evaluating the video object based on the position on the control grid, ie. predetermined criterion, used for evaluating a portion of the inputted image; and in col.35, ln.10-21, Hibi discloses the use of variable-size processable areas, where the control grid points are set for each unit area of 16x16 pixels or 8x8 pixels, for evaluating the video object or processable object dependent upon the position within the processable area); and

program code configured to generate one of a plurality of mask types for the video object based on the evaluation of the video object (fig.23 and col.35, ln.10-37; Hibi discloses using plural mask types, as evidenced by the generation of mask 1, 2, 3, etc., and that these "effective-area selecting masks" apply plural mask types for effective area selection of the video object during the evaluation of video objects dependent on the position of each processable area by using the selective mask, wherein the processable area is variable for implementation during the evaluation of the video object).

Regarding claim 20, Hibi discloses a method for encoding video objects in an object based video communication system, comprising the steps of:

evaluating a video object using a predetermined criterion (see abstract, Hibi discloses that an effective-area selecting portion selects a valid or invalid mask

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depending upon a position of a processable object; further, in col.32, ln.66 to col.33, ln.9, Hibi discloses the effective area selection portion 231 for effectively evaluating the video object based on the position on the control grid, ie. predetermined criterion, used for evaluating a portion of the inputted image; and in col.35, ln.10-21, Hibi discloses the use of variable-size processable areas, where the control grid points are set for each unit area of 16x16 pixels or 8x8 pixels, for evaluating the video object or processable object dependent upon the position within the processable area); and

generating one of a plurality of mask types for the video object based on the evaluation of the video object (fig.23 and col.35, ln.10-37; Hibi discloses using plural mask types, as evidenced by the generation of mask 1, 2, 3, etc., and that these "effective-area selecting masks" apply plural mask types for effective area selection of the video object during the evaluation of video objects dependent on the position of each processable area by using the selective mask, wherein the processable area is variable for implementation during the evaluation of the video object).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2, 4, 7-9, 12, 14, 17-19, 21, 23 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibi (5,886,742) in view of Chen (6,208,693).

Regarding claims 2, 12 and 21, Hibi discloses wherein the plurality of mask types includes a pixel-based mask (col.35, ln.10-35). Hibi does not specifically disclose a bounding box mask, and a macroblock-based mask. However, Chen teaches the use of a bounding box mask (col.7, ln.11-12), and a macroblock-based mask (col.7, ln.23-30). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claims 4, 14 and 23, Hibi does not specifically disclose wherein the predetermined criterion examines a texture of the video object. However, Chen discloses the predetermined criterion examines a texture of the video object (col.4, ln.28-32). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claims 7 and 17, Hibi does not specifically disclose wherein the predetermined criterion includes whether an area of the video object shape is substantially similar to an area of a generated bounding box. However, Chen discloses wherein the predetermined criterion includes whether an area of the video object shape is substantially similar to an area of a generated bounding box (col.7, ln.11-21 and fig.3). Therefore, it would have been obvious to combine the teachings of Hibi and

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Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claims 8 and 18, Hibi does not specifically disclose wherein the predetermined criterion includes whether an area of a macroblock-based shape generated for the video object is substantially similar to the area of the generated bounding box. However, Chen discloses the video object encoding system of claim 7, wherein the predetermined criterion includes whether an area of a macroblock-based shape generated for the video object is substantially similar to the area of the generated bounding box (col.7, ln.11-21 and fig.3). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claims 9 and 19, Hibi does not specifically disclose wherein the predetermined criterion includes whether the area of a macroblock-based shape is larger than the area of the video object shape. However, Chen teaches wherein the predetermined criterion includes whether the area of a macroblock-based shape is larger than the area of the video object shape (col.7, ln.11-21 and fig.3). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claim 26, Hbi does not specifically disclose wherein the evaluating step includes: generating a bounding box; and determining if an area of the object

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shape is substantially similar to an area of the generated bounding box. However, Chen discloses the method of claim 22, wherein the evaluating step includes: generating a bounding box (col.7, ln.11-12); and determining if an area of the object shape is substantially similar to an area of the generated bounding box (col.7, ln.11-21 and fig.3). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claim 27, Hibi does not specifically disclose wherein the evaluating step includes: generating a macroblock-based shape; and determining whether an area of the macroblock-based shape is substantially similar to the area of the generated bounding box. However, Chen discloses wherein the evaluating step includes generating a macroblock-based shape (col.7, ln.11-21 and fig.3); and determining whether an area of the macroblock-based shape is substantially similar to the area of the generated bounding box (col.7, ln.11-21 and fig.3). Therefore, it would have been obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Regarding claim 28, Hibi does not specifically disclose wherein the evaluating step includes determining whether the area of a macroblock-based shape is larger than the area of the object shape. However, Chen discloses wherein the evaluating step includes determining whether the area of a macroblock-based shape is larger than the area of the object shape (col.7, ln.11-21 and fig.3). Therefore, it would have been

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obvious to combine the teachings of Hibi and Chen as a whole for accurately, efficiently encode image data while improving maintain high image quality (col.2, ln.66 to col.3, ln.2).

Claims 6, 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibi (5,886,742) in view of Sekiguchi (6,611,628).

Regarding claims 6, 16 and 25, Hibi does not specifically disclose a system, a program product and method wherein the predetermined criterion includes whether the video object shape is substantially circular. However, Sekiguchi teaches a system where the substantial roundness or circularity of a video object shape can be determined (col.14, ln.54-59). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Sekiguchi's teaching into the system of Hibi for efficiently encoding of image features in an accurate, high quality manner (Sekiguchi col.2, ln.19-22).

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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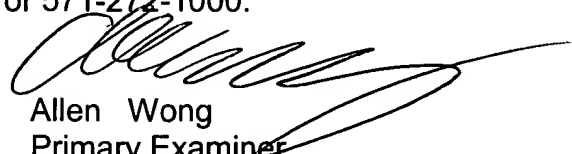
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Groody can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Allen Wong
Primary Examiner
Art Unit 2621

AW
3/27/07